THE SIGNIFICANCE OF A POSITIVE GASTRIC LAVAGE CULTURE ON DISCHARGE *

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A STUDY is presented of readmission rates for patients discharged from Olive View Sanatorium after gastric lavage examination. Of 307 patients discharged before January 1, 1941, 16 or 5.2 per cent have been readmitted. Those whose gastric lavage was negative before discharge show a readmission rate of 2.4 per cent, as compared to 17.4 per cent for those with a positive culture on discharge. Cavitation, and/or positive sputum, was present at the time of readmission in six of ten patients who had been discharged with a positive gastric lavage culture; in three, of six discharged with negative culture.

THE PROGNOSIS OF THE SO-CALLED "GOOD CHRONIC"**

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PROFESSOR Archibald apparently was the first to employ the term "good chronic case" in tuberculosis. Brown and Sampson suggested as criteria for a "good chronic" case that a "cavity two centimeters or more must be present. General condition must be favorable. Temperature and pulse must be normal over a period of several months. Appetite and strength must be good and the patient able to take some exercise. Expectoration may be present but not excessive." The number of tubercle bacilli in the sputum is not taken into consideration. It should be noted that this grouping of patients is based mainly upon clinical data.

Chronic fibroid pulmonary tuberculosis represents the pathology in the majority of these patients. Production of fibrous tissue is the predominant characteristic, due to the age of the lesion. Tuberculous complications occur less frequently than in the more acute forms. The symptoms are, with few exceptions, not pronounced. The majority of these patients give a history of illness extending over a period of ten or fifteen years. Treatment is mainly symptomatic, but some of these individuals may become candidates for thoracic surgery.

Patients are rarely free from symptoms and never well; most of the time they are able to be up and around and with symptomatic care are kept comfortable. Isolation is necessary in most cases.

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Abstract.
From the staff of Olive View Sanatorium.

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THE PULMONARY ASPECTS OF CYSTIC FIBROSIS OF THE PANCREAS*

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THIS entity has been recognized for some years, but I do not believe it has ever been formally discussed before this group. The respiratory symptoms and signs are the most startling part of the picture, and if these be present the prognosis is poor. The symptoms always develop in the first year of life, the patient is usually seen by the general practitioner or pediatrician first, and by the phthisiologist usually only in consultation. In any patient under two years of age, with a chronic respiratory infection extending from the tip of the nose to the alveoli, with sputum and a negative tuberculin reaction, cystic fibrosis should be thought of immediately, despite the fact that the diagnosis is made often only after necropsy. If suspected at all, the diagnosis can be made during life if a careful history be taken, and can be confirmed in many cases previously diagnosed as "chronic, or unresolved pneumonias," if the pancreas be sectioned at necropsy.

The first description of the pancreatic lesion was recorded by Landsteiner in 1905. In 1913, Garrod and Hurtley made a careful clinical study of a case of congenital steatorrhea in a boy of six whose brother died of bronchopneumonia at eleven months, after an infancy characterized by steatorrhea. No post-mortem examinations were recorded. Passini reported the first case of steatorrhea associated with a proved pancreatic lesion, the patient dying of bronchopneumonia at nine months. Necropsy demonstrated a fibrotic pancreas with acinar cysts. Siwe, in 1932, Benoit in 1935, and Tilling examined cases and confirmed diagnoses by examining the duodenal contents for pancreatic enzymes. On our cases we had not the facilities for these examinations. In 1938, Anderson reviewed the literature and reported cases. She considered the steatorrhea consequent upon the pancreatic deficiency as the cause of the deficiency of Vitamin A, and probably of D. She described the changes in the bronchial mucosa as the predisposing cause of the bronchopneumonia which is present in all cases coming to autopsy. The disease was common enough to be found in about three per cent of a series of necropsies at the Babies Hospital of New York.

There are now about one hundred cases reported with half proved by postmortem examination. The defective absorption of Vitamin A, suggested by Anderson, has been proved by Blackfan and May, and by others.

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Abstract.
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A series of three cases is reported. The symptoms presented were chiefly those of early failure to gain on an adequate diet, with steatorrhea, and soon the symptoms of intermittent or chronic respiratory infection. These are the symptoms for which the patient is often brought first to the physician. The latter soon dominate the clinical picture. Sometimes, conjunctivitis is present. The child is underweight and there is abdominal distension. If the baby be premature the symptoms may be present very early as there is less Vitamin A stored in the tissues. In the diagnosis, the other diseases to be considered are lipoid pneumonia, coeliac disease, asthma, the chronic specific infections such as tuberculosis, syphilis, coccidiomycosis, and unresolved pneumococcus pneumonia or pertussis. The differential diagnosis is made more easy by careful and thorough histories, laboratory examinations, clinical tests, and roentgen studies. An enlarged thymus or foreign body is often suggested, at least by the parents, as a possibility.

The pathological conditions present are, first, a primary fibrotic or cystic pancreas, probably of congenital origin as suggested by associated congenital anomalies and a frequently elicited familial history. The pancreatic ducts may be open or in a state of atresia. Either small multiple abcesses, bronchiectasis, often more marked in the upper lobes, or chronic pneumonia, or combinations of these are present if the patient comes to autopsy. Osteoporosis may be present if the patient lives into the second year, perhaps dependent upon deficient calcium and Vitamin D absorption. True rickets is usually absent probably because of the slowness of growth.

The treatment consists of supplying pancreatic enzymes and large amounts of Vitamin A by mouth, supplemented by further large amounts of Vitamin A intramuscularly. Banana powder, containing large amounts of invert sugar, is most easily absorbed in the absence of deficiency of natural pancreatic juice. Supportive treatment is essential, and sulfathiazole may aid in keeping infection lessened. Avoidance of exposure to infection should be rigid. One patient has been recorded as having lived 14½ years. Anderson has diagnosed ten patients by examination of duodenal contents for pancreatic juice. Of these, seven have died. Three are alive and well, between eighteen and twenty-four months of age, are gaining well and have largely or entirely recovered from their respiratory infections. She states that the prognosis is uncertain, but suggests that with the proper treatment, they may lead fairly normal lives.

As the pathological changes in the respiratory mucous membrances may in part be irreversible, obviously the most important single item in the treatment is its early initiation. This is dependent on its early recognition, the burden of which lies with the pediatrician and the general practitioner.

Tuberculosis is a tremendous economic problem. Over $70,000,000 was spent last year on hospital care alone.

WHAT PATIENTS SHOULD BE TREATED AND BY WHAT METHOD? *

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RATIONAL therapy is dependent on careful evaluation of both the tracheobronchial lesions and the subtending pulmonary tuberculosis. Fundamentals of bed rest and balanced high caloric diet must not be forgotten. Attention should be drawn to Bogen's report on the improvement of mucous membrane lesions following the ingestion of large amounts of vitamin C. It is recommended that this routine be followed as part of the general program. The use of general body radiation with ultra-violet light appears to have lost favor as a specific means of treating tracheobronchial lesions. There is the additional danger of exacerbation of the pulmonary tuberculosis.

DIFFUSE NONULCERATIVE NONSTENOTIC BRONCHIAL DISEASE

This type is characterized by congestion and edema of the mucosa, usually involving the orifice of the lobar bronchis and extending proximally in the stem bronchus. I suspect some of these lesions are non-specific. The majority are tuberculous however, proved by the later development of frank ulceration. Biopsy is contraindicated. Such lesions may well represent a type of allergic response in the mucosal and submucosal tissues. In general, no local treatment should be used. The pulmonary tuberculosis should be treated as indicated without regard to bronchial lesion.

FIBROSTENOSIS

The decision as to the employment of local treatment depends on whether or not symptoms are being produced by the stenosis. In the rare case of circumscribed stricture symptoms may be completely relieved by simple dilatation. More often, however, the stenosis is an irregular scar-tissue tunnel one or more centimeters in length, and dilatation is not effective. Kernan has had some success with copper bougies, using a negative galvanic current. In the presence of a stenosis the treatment of the pulmonary lesion must be carefully evaluated. In general, collapse pneumothorax does not yield good results. It is almost certain that complete and permanent atelectasis will follow, if there is any appreciable degree of stenosis. Fibrous stenosis is an irreversible process and we favor thoracoplasty whenever possible. If the patient has had trouble in expectorating prior to operation because of a stenosis, aspiration bronchoscopy has been employed routinely at the conclusion of surgery. In rare cases

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